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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/069,093	02/01/2002	Georg Steinbichler	H55-054 US	7526
21706	7590	04/01/2004	EXAMINER	
NOTARO AND MICHALOS 100 DUTCH HILL ROAD SUITE 110 ORANGEBURG, NY 10962-2100			HEITBRINK, JILL LYNNE	
			ART UNIT	PAPER NUMBER
			1732	

DATE MAILED: 04/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

AS

Office Action Summary

Application No.

10/069,093

Applicant(s)

STEINBICHLER ET AL.

Examiner

Jill L. Heitbrink

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 7, 9 and 10 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Bronnenkant et al. Pat. No. 3,052,925. See col. 1, lines 10-24 and col. 4, lines 18-45. The shut-off means (nozzle valve 63) being opened in a controlled manner in order to modify a pressure pattern in the mold cavity is equivalent to Bronnenkant's opening the valve to allow the plastic material to "explode" into the mold cavity (col. 4, lines 62-68) wherein the explosion of the plastic material into the cavity changes the pressure in the cavity to modify a pressure pattern in the mold cavity. Any type of opening of a valve is a "controlled manner". The filling of the mold cavity causes the pressure to change in the cavity and thus "modify a pressure pattern in the mold cavity"

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 7, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bronnenkant et al. Pat. No. 3,052,925.

5. It is unclear in the specification and claims as to what type of modification in the pressure pattern is occurring from the controlled manner of opening the valve.

Additionally, it is unclear as to what manner the control is and how the opening of the shut-off means effects the pressure pattern in the mold cavity. The following is a different interpretation of these terms which are obviously met by Bronnenkant et al.

6. The pressure in the antechamber is controlled to "a predetermined pressure" in Bronnenkant (col. 4, lines 26-36). The shut-off means being opened in a controlled manner in order to modify a pressure pattern in the mold cavity would have been obvious in Bronnenkant since a change in the predetermined pressure in the chamber will inherently change the pressure pattern in the mold cavity and the nozzle valve will be opened in a controlled manner after the predetermined pressure has been reached in the chamber.

7. Claims 8 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bronnenkant et al. Pat. No. 3,052,925 taken together with Xu Pat. No. 6,322,347.

8. Xu teaches a process of injection molding foam material wherein the material accumulates in the space 81 closed by valve 64 with a pressure of over 1000 bars (col. 11, lines 58-65 pressure of about 1500 to about 30,000 psi). The pressure produced in Bronnenkant for the expansive pressure to fill the mold being over 1000 bars would have been obvious to a person of ordinary skill in the art since these high pressure are

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known in the art of injection molding so as to maintain a single phase material prior to exploding into the mold cavity.

9. Claims 8 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Xu Pat. No. 6,322,347 taken together with Weidner et al. Pat. No. 4,266,928.

10. Xu discloses a process of injection molding foam material wherein the material accumulates in the space 81 closed by valve 64 with a pressure of over 1000 bars (col. 11, lines 58-65 pressure of about 1500 to about 30,000 psi). Weidner et al. teaches that the pressure difference between the accumulator and the mold causes the foam to be sucked in the mold. It would have been obvious to a person of ordinary skill in the art that the high pressure within the space 81 will cause, upon opening of the valve 64, the existence of at least half of the pressure achieved in the cavity in the method occurring even if the volume of the antechamber is kept constant during the injection operation. Clearly, even if the volume of the antechamber is kept constant material will flow and foam into the cavity of Xu to a significant amount caused by the high pressure in the space 81. "At least half of the pressure achieved in the mould cavity" is dependent on the pressure achieved in the mold cavity and thus is variable. The pressure achieved in the mold cavity of Xu is taught to be low so as to provide the desired nucleation density.

Response to Arguments

11. Applicant's arguments filed Jan. 14, 2004 have been fully considered but they are not persuasive.

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12. Applicant argues that Bronnenkant does not teach that it is very important to be able to precisely control the pressure pattern when opening the shut-off means.

However, applicant's specification does not teach any precise control. It is unknown what is considered to be the pressure pattern and what is considered to be a modified pressure pattern. It is unknown what and how the shut-off means is controlled in any type of manner. No precise control is disclosed by applicant.

13. Applicant argues that Bronnenkant does not adapt the pressure drop when opening the shut-off means to a particular design of the injection molded article.

However, this is not disclosed in the specification or claimed by applicant.

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jill L. Heitbrink whose telephone number is 571-272-1199. The examiner can normally be reached on Monday - Friday 9:30-2:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael P. Colaianni can be reached on 571-272-1196. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jill L. Heitbrink
Primary Examiner
Art Unit 1732

jlh